SERIAL No. 3324

ONKYO® SERVICE MANUAL

Integrated Stereo Amplifier
MODEL A-RV400, A-RV400M

UD	120V AC, 60Hz
UG	220V AC, 50Hz
UQ (A, B)	240V AC, 50Hz
UW	120V/220V AC, 50Hz/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

ONKYO
AUDIO COMPONENTS

SPECIFICATIONS

U.S.A. & Canadian models

Power Output:	100 watts per channel, min RMS, at 8 ohms, both channels driven from 20 Hz to 20 kHz, with no more than 0.08% THD.	
Total Harmonic Distortion:	0.08% at rated power	
IM Distortion:	0.08% at rated power	
Damping Factor:	40 at 8 ohms	
Frequencey and Response:	15–30,000 Hz ±1 dB	
Sensitivity and Impedance:	Phono:	2.5 mV/50 kohms
	Tuner/CD/VCR-1, VDP:	150 mV/50 kohms
	Source Direct:	150 mV/50 kohms
	Tape/VCR-2 Play:	150 mV/50 kohms
	Tape/VCR-2 Rec:	150 mV/3 kohms (phono)
Phono Overload:	150 mV RMS at 1 kHz, 0.08% THD (REC)	
Bass Control:	±10 dB at 100 Hz	
Treble Control:	±10 dB at 10,000 Hz	
Selective Tone Control:	±15 dB at 50 Hz/±6 dB at 10 kHz	
Signal to Noise Ratio (IHF-A):	Phono:	80 dB (5 mV input)
	Source Direct (CD):	102 dB

General

Power Supply:	USA & Canadian models: AC 120V, 60 Hz	
Dimensions (W × H × D):	435 × 143 × 287 mm	
	17-1/8" × 5-5/8" × 11-5/16"	
Weight:	9.1 kg, 20.1 lbs.	

Remote Control Transmitter RC-142S

Transmitter:	Infrared.
Signal range:	Approx. 5 meters, 16ft.
Power supply:	Two "AA" batteries (1.5 V × 2)
Dimensions (W × H × D):	64 × 18 × 176 mm
	2-1/2" × 11/16" × 6-15/16"
Weight:	130 grams. 4.6 oz. (including batteries)

European models

Power Output:	80 watts per channel, min RMS, at 8 ohms, both channels driven from 20 Hz to 20 kHz, with no more than 0.08% THD.	
	2 × 120 watts at 4 ohms, 1 kHz (DIN)	
	2 × 90 watts at 8 ohms, 1 kHz (DIN)	
Total Harmonic Distortion:	0.08% at rated power	
IM Distortion:	0.08% at rated power	
Damping Factor:	40 at 8 ohms	
Frequencey and Response:	15–30,000 Hz ±1 dB	
Sensitivity and Impedance:	Phono:	2.5 mV/50 kohms
	Tuner/CD/VCR-1/VDP:	150 mV/50 kohms
	Source Direct:	150 mV/50 kohms
	Tape/VCR-2 Play:	150 mV/50 kohms
	Tape/VCR-2 Rec:	150 mV/3 kohms (phono)
Phono Overload:	150 mV RMS at 1 kHz, 0.08% THD (REC)	
Bass Control:	±10 dB at 100 Hz	
Treble Control:	±10 dB at 10,000 Hz	
Selective Tone Control:	±15 dB at 50 Hz/±6 dB at 10 kHz	
Signal to Noise Ratio (IHF-A):	Phono:	80 dB (5 mV input)
	Source Direct (CD):	102 dB

General

Power Supply:	(except U.K.):	AC 220V, 50 Hz
	U.K. & Australian models:	AC 240V, 50 Hz
	Worldwide models:	AC 120V and 220V switchable, 50/60 Hz
Dimensions (W × H × D):	435 × 143 × 287 mm	
	17-1/8" × 5-5/8" × 11-5/16"	
Weight:	9.1 kg, 20.1 lbs.	

Remote Control Transmitter RC-143S

Transmitter:	Infrared
Signal range:	Approx. 5 meters, 16ft.
Power supply:	Two "AA" batteries (1.5 V × 2)
Dimensions (W × H × D):	64 × 18 × 176 mm
	2-1/2" × 11/16" × 6-15/16"
Weight:	130 grams. 4.6 oz. (including batteries)

ADJUSTMENT PROCEDURES

Adjustments and Checking the Protection Circuitry

1. Preparations

1) Place the unit on the workbench. (There should be about 15 mm of space between the base plate of the unit and the work surface.)
2) Set up the unit as follows.
   (1) No load
   (2) No signal
   (3) Volume turned all the way down
   (4) Speaker switch OFF
   (5) Power switch OFF

Note) Check the following points before making adjustments
   (1) The power switch should be OFF.
   (2) The interior of the unit should not be warm.

2. Idling current adjustment

1) Turn the power switch ON and allow the unit to warm up for about 10 minutes.
   (1) Ajust R529 (R530) so that the voltage at test point VCT-ID on the NAAF-3547 circuit board is 9.5mV±3.5mV

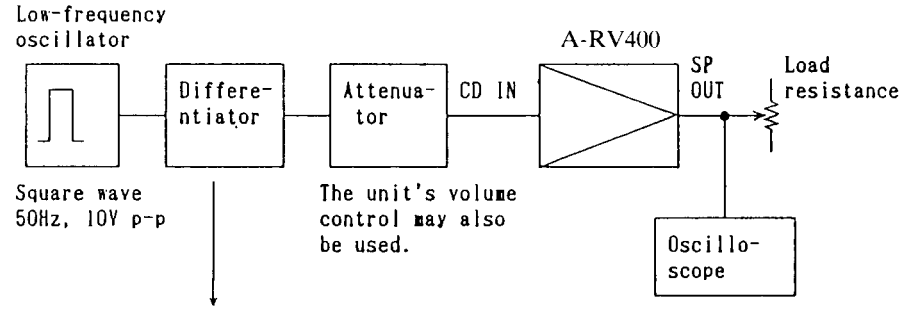
3. Check of operation of protection circuitry

1) Check of operation of protection relay.
   (1) Confirm that the relay turns ON approximately 5 seconds after the power switch is turned ON.
   (2) The relay should turn OFF approximately 0.5 seconds after the power switch is turned OFF.
2) Check of DC detection
   (1) Turn the power on with no load.
   (2) After the speaker relay turns ON, apply DC +1.5V to the CD input terminals. Confirm that the relay turns OFF.
   (3) Confirm that operation is the same as (2) above when an input of DC −1.5V is applied.

Note) Under no circumstances connect a load or short the speaker terminals when performing the above test.

3) Signal input from the circuit illustrated below with no load.
   (1) Confirm that the speaker relay does not turn OFF even when a 2 ohm load is connected when a peak value of 35V p-p is output.
   (2) Next, confirm that when a 1 ohm load is connected the speaker relay switches OFF and ON a couple of times and then stays OFF.

Note) The period before that relay stays OFF should not last for more than 10 second.
Relay OFF status can be canceled by switching the power OFF.



NOTE) Semi-fixed resistors enclosed in parentheses ( ) are for the right channel.

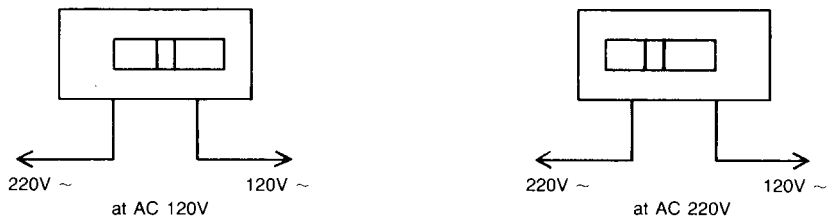
PRECAUTIONS

1. **Replacing the fuses**
   For continued protection against risk fire, replace only with same type and same rating fuse.

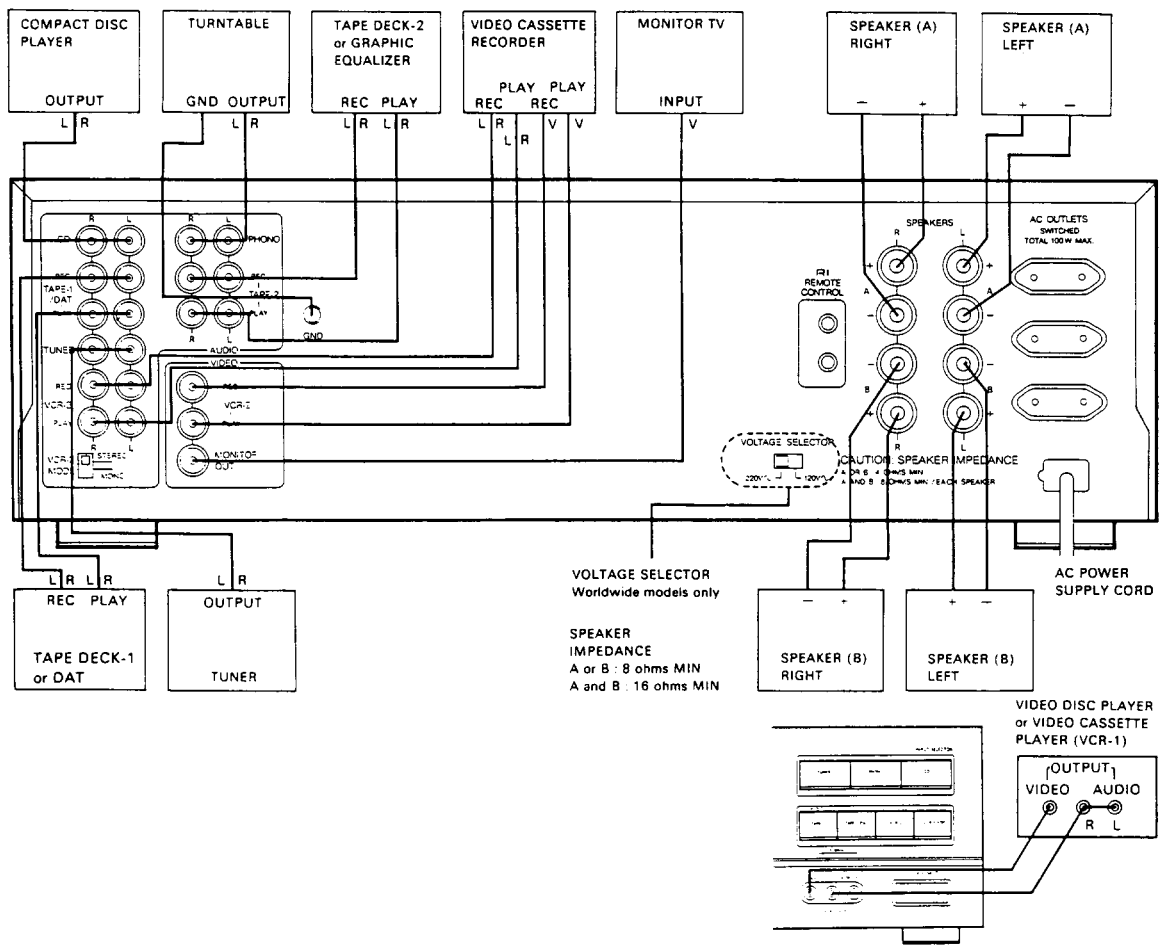
CIRCUIT NO.	PART NO.	DESCRIPTION
F901	252052	7A ST-6, Primary fuse (120V, 120V/220V model)
F902	252076 or	3.15A-SE-EAK or
	252076CC	3.15A-SE-EAK Primary fuse (220V, 240V, 120V/220V model)

2. **Insulation resistance mesurement (Only U.S.A. model)**
   Connect the insulating-resistance tester between the plug of power supply cable and the terminal GND on the back panel.
   Specifications; More than 10 MΩ at 500V.

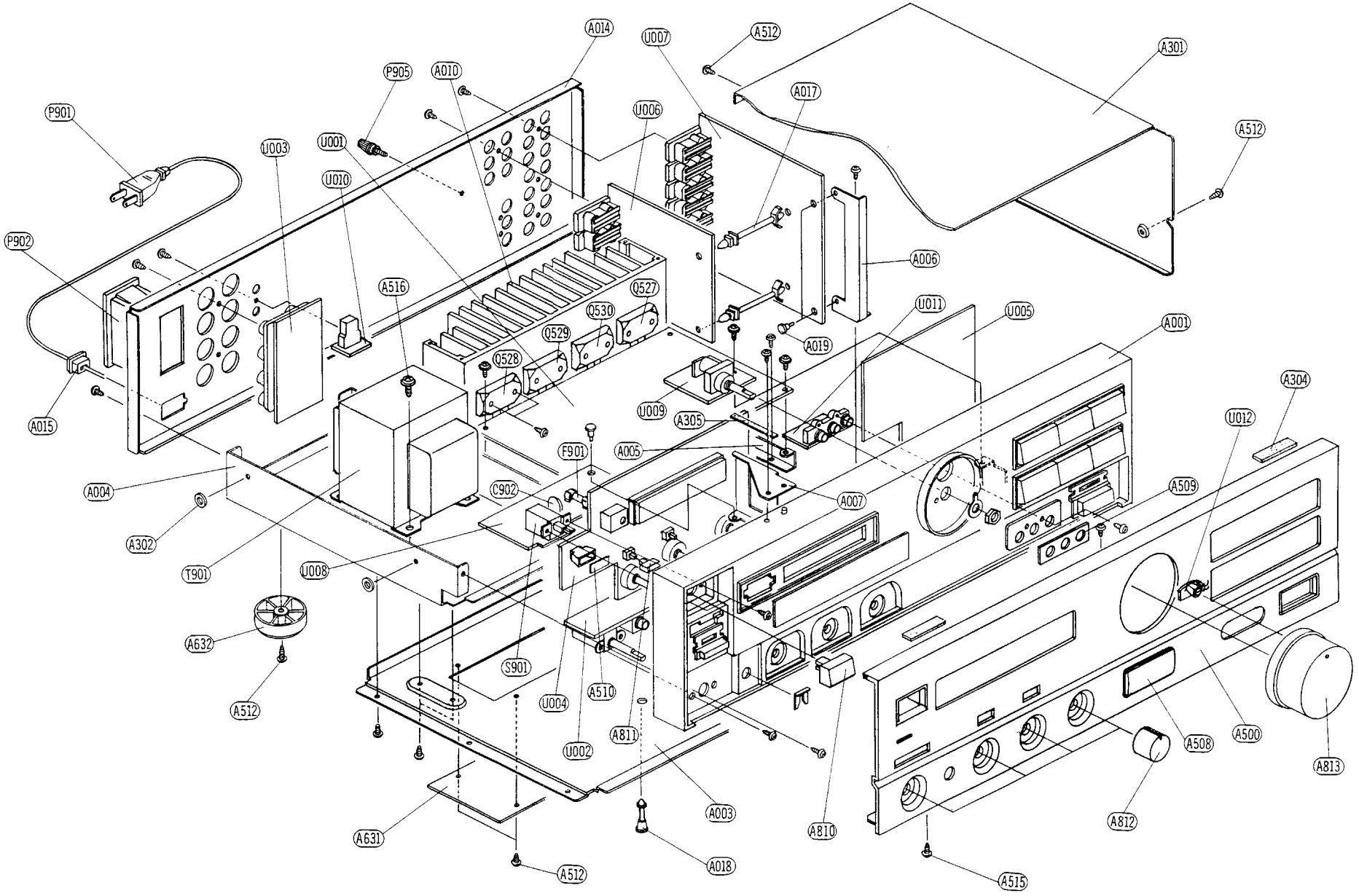
3. **Voltage selector (rear panel)**
   Worldwide models are equipped with a voltage selector to conform with local power supplies. Be sure to set this switch to match the voltage of the power supply in your area before turning the power switch on. Voltage is changed by sliding the groove in the switch with a screwdriver to the right or left. Confirm that the switch has been moved all the way to the right or left before turning the power switch on. Models without a voltage selector can only be used in areas where the power supply is the same as that of the unit.



SYSTEM CONNECTIONS



CHASSIS-EXPLODED VIEW



CHASSIS EXPLODED VIEW PARTS LIST

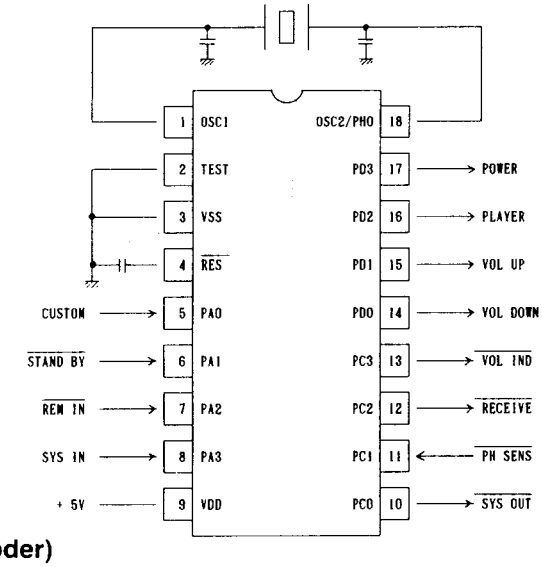
REF. NO.	PART NO.	DESCRIPTION
A001	27110482A	FRONT ANGLE ASS'Y
A003	27100185A	CHASSIS
A004	27130573B	BRACKET (PT)
A005	27141332	BRACKET (PC)
A006	27141329	BRACKET (SW)
A007	27141324	BRACKET (POW)
A010	27160239	HEATSINK
A014	27121223A	BACK PLATE [D]
A014	27121224A	BACK PLATE [G]
A014	27121226A	BACK PLATE [W]
A014	27121265	BACK PLATE [A][B]
A015	27300750	BUSHING (CABLE)
A017	27190369	KGLS-22S, PC HOLDER
A018	27190511	KGLS-16R, PC HOLDER
A019	880009	NRP-345, REVET
A301	28184436	TOP COVER
A302	27270147	SPACER
A304	28140555	CUSHION
A305	28140729	CUSHION
A500	1A143121	FRONT PANEL
(A503)	27267582A	GUIDE (POW)
(A504)	28198723A	FACKET
(A505)	28191503A	CLEAR PLATE
(A506)	27267584	GUIDE (SD)
(A507)	27267591	GUIDE (TONE)
A508	28135176	NAME PLATE
A509	27262415	PLATE (T)
A510	28149181	FILM
A512	834430088	3TTS+8BBC, TAPPING SCREW
A515	833430080	3TTP+8PBC, TAPPING SCREW
A516	830440089	4TTC+8CBC, TAPPING SCREW
A631	27170261	BOTTOM BOARD
A632	27175219	BOTTOM BOARD
A810	28323241-1	KNOB (POW)
A811	28323648	KNOB (STC)
A812	28323677A	KNOB (TONE)
A813	28323675A	KNOB (VOL)
A890	29360626-1	CAUTION LABEL (FUSE) [D]
Q527, Q528	2201803 or 2201804 or 2201806	2SC3857-O or 2SC3857-Y or 2SC3857-P, TRANSISTOR
Q529, Q530	2201793 or 2201794 or 2201796	2SA1493-O or 2SA1493-Y or 2SA1493-P, TRANSISTOR
⚠ T901	2300418	NPT-1029D, POWER TRANSFORMER [D]
⚠ T901	2300419A	NPT-1030G, POWER TRANSFORMER [G]
⚠ T901	2300420	NPT-1030DG, POWER TRANSFORMER [W]
⚠ T901	2300445	NPT-1030Q, POWER TRANSFORMER [A][B]
⚠ P901	253123 or 253136 or 253140 or 253146	AS-UC-6 #18 or [D] AS-UC-6 #18 or [D] AS-UC-6 #18 or [D] AS-UC-6 #18, POWER SUPPLY CABLE [D]
⚠ P901	253149	AS-CEE, POWER SUPPLY CABLE [G]
⚠ P901	253092-1A	AS-CEE-2, POWER SUPPLY CABLE [W]
⚠ P901	253118	AS-SAA, POWER SUPPLY CABLE [A]
⚠ P901	253104 or 253105	C2.5BS2 or [B] C2.5BS2, POWER SUPPLY CABLE [B]
⚠ P902	25050336	NSCT-6P163, AC SOCKET [D]
⚠ P902~P904	25050337	NSCT-2P164, AC SOCKET [G][W][A][B]
P905	25060044	GROUND TERMINAL
⚠ S901	25035550	NPS-111-L512P, POWER SWITCH
⚠ S902	25065123	NSS-1258P, SLIDE SWITCH [W]
⚠ C902	3500065A	0.01μF, AC400V/125V, CAPACITOR
⚠ F901	252052	7A(ST-6), FUSE [D][W]
⚠ F902	252076 or 252076CC	3.15A-SE-EAK or [G][W][A][B] 3.15A-SE-EAK FUSE [G][W][A][B]
⚠ F903	252075 or 252075CC	2.5A-SE-EAK or[G] 2.5A-SE-EAK, FUSE[G]
U001	1A143547-2	NAAF-3547-2, MAIN PC BOARD ASS'Y [D]
U001	1A143547-2A	NAAF-3547-2A, MAIN PC BOARD ASS'Y [G][W][A][B]
U002	1A143548-2	NASW-3548-2, SPEAKER SWITCH PC BOARD ASS'Y
U003	1A143549-2	NAETC-3549-2, SPEAKER TERMINAL PC BOARD ASS'Y [D]
U003	1A143549-2A	NAETC-3549-2A, SPEAKER TERMINAL PC BOARD ASS'Y [G][W][A][B]
U004	1A143564-1	NADG-3564-1, SYSTEM CONTROL CIRCUIT PC BOARD ASS'Y [D]
U004	1A143564-1A	NADG-3564-1A, SYSTEM CONTROL CIRCUIT PC BOARD ASS'Y [G][W]
U004	1A143564-1B	NADG-3564-1B, SYSTEM CONTROL CIRCUIT PC BOARD ASS'Y [A][B]
U005	1A143565-1	NASW-3565-1, KEY SWITCH PC BOARD ASS'Y
U006	1A143566-1	NAETC-3566-1, EQUALIZER CIRCUIT PC BOARD ASS'Y [D]
U006	1A143566-1A	NAETC-3566-1A, EQUALIZER CIRCUIT PC BOARD ASS'Y [G][W][A][B]
U007	1A143567-1	NAAF-3567-1, SELECTOR SWITCH CIRCUIT PC BOARD ASS'Y [D]
U007	1A143567-1A	NAAF-3567-1A, SELECTOR SWITCH CIRCUIT PC BOARD ASS'Y [G][W][A][B]
U008	1A143568-1	NAPS-3568-1, POWER SWITCH CIRCUIT PC BOARD ASS'Y [D]
U008	1A143568-1A	NAPS-3568-1A, POWER SWITCH CIRCUIT PC BOARD ASS'Y [G]
U008	1A143568-1B	NAPS-3568-1B, POWER SWITCH CIRCUIT PC BOARD ASS'Y [W]
U008	1A143568-1C	NAPS-3568-1C, POWER SWITCH CIRCUIT PC BOARD ASS'Y [A][B]
U009	1A143569-1	NAETC-3569-1, VOLUME CONTROL CIRCUIT PC BOARD ASS'Y
U010	1A143570-1	NAETC-3570-1, BUS TERMINAL PC BOARD ASS'Y [D]

REF. NO.	PART NO.	DESCRIPTION
U010	1A143570-1A	NAETC-3570-1A, BUS TERMINAL PC BOARD ASS'Y [G][W][A][B]
U011	1A143571-1	NAETC-3571-1, VIDEO TERMINAL PC BOARD ASS'Y [D]
U011	1A143571-1A	NAETC-3571-1A, VIDEO TERMINAL PC BOARD ASS'Y [G][W][A][B]
U012	1A143572-1	NADIS-3572-1, VOLUME INDICATOR PC BOARD ASS'Y

NOTE: [D]: ONLY 120V MODEL
[G]: ONLY 220V MODEL
[W]: ONLY 120V/220V MODEL
[A]: ONLY AUSTRALIAN MODEL
[B]: ONLY BRITISH MODEL

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PARTS NUMBER SPECIFIED.

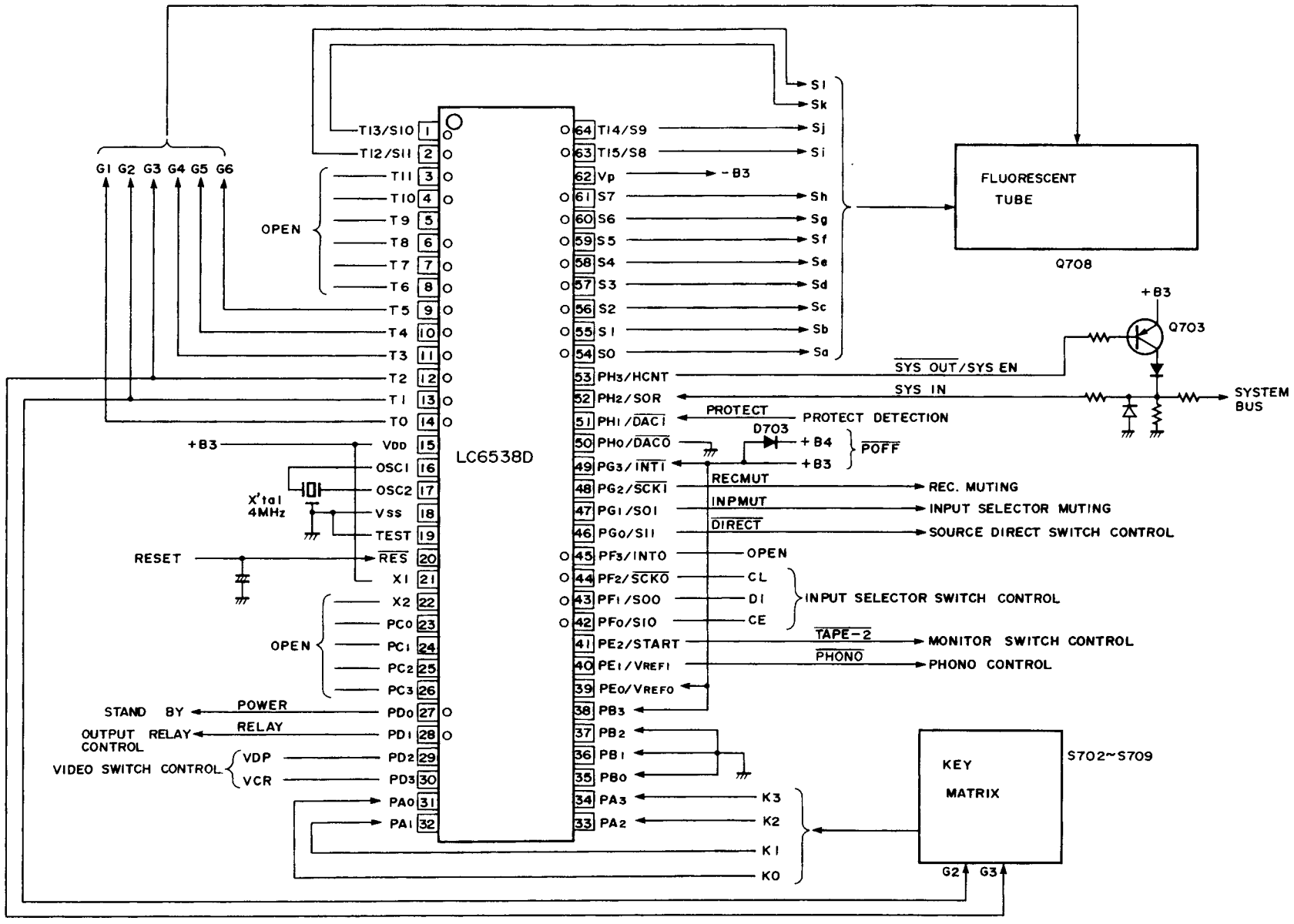
IC BLOCK DIAGRAM



LC6527C (Remoto controlle decoder)

Pin No.	Pin name	Symbol	Function
1	OSC1	OSC1	Ceramic oscillator connector terminal. 4 MHz. 1/3 division.
2	TEST	TEST	Test terminal. Connected to V_{SS}.
3	V_{SS}	V_{SS}	Ground terminal
4	RES	RES	Reset terminal.
5	PA0	CUSTOM	Decoded input terminal with switchable custom codes and operations. Custom input / Custom code / Operation L / D26D / System (export) H / D225 / Tuner This terminal is read when power is turned on and the above initial settings are carried out.
6	PA1	STAND BY	Standby condition sensor terminal. Only the POWER code is decoded when STAND BY input is "L".
7	PA2	REM IN	Remote control signal input terminal. Active: "L". The photo-sensor output is connected to this terminal.
8	PA3	SYS IN	System code input terminal. Active: "H". Output system codes are monitored at this terminal.
9	V_{DD}	V_{DD}	Power supply (+5V) terminal.
10	PC0	SYS OUT	System code output terminal. Active: "L". This terminal output the appropriate system code in response to input from the remote control.
11	PC1	PH SENS	PHONO sensor input terminal. Active: "L". This terminal is valid during system. The remote control K64 code is decoded only when this terminal is "L".
12	PC2	RECEIVE	RECEIVE display output terminal. Active: "L". "L" when remote control codes for decoding are being input.
13	PC3	VOL IND	VOLUME indicator output terminal. Active: "L". Normally "L". Outputs waveform which is "H" for 250 ms then "L" for 250 ms during VOLUME UP or VOLUME DOWN output.
14	PD0	VOL DOWN	VOLUME DOWN control output terminal. Active: "H". Output is "H" when remote control K4 code is input.
15	PD1	VOL UP	VOLUME UP control output terminal. Active: "H". Output is "H" when remote control K3 code is input.
16	PD2	PLAYER	PLAYER control output terminal. Active: "H". This terminal is valid during system. Output is "H" for 200 ms if remote control K64 code is input when PH SENS input is "L".
17	PD3	POWER	POWER control output terminal. Active: "H". Reverses output whenever remote control K5 code is input.
18	OSC2/PHO	OSC2	Ceramic oscillator connector terminal. 4 MHz 1/3 division.

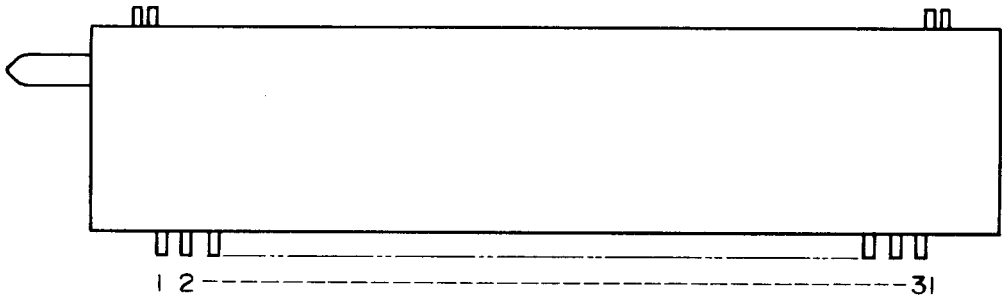
LC6538D (Micro computer)

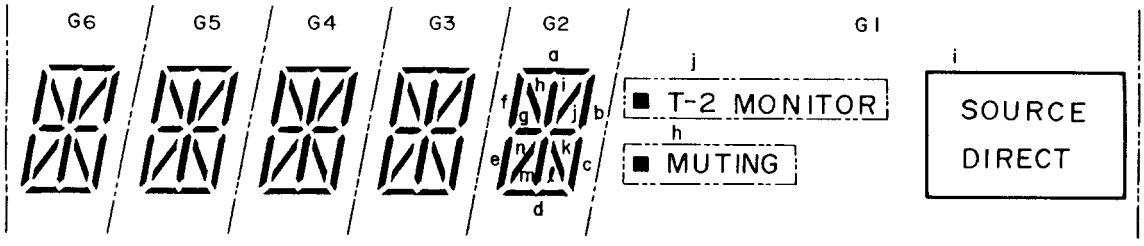


LC6538D

Pin No.	Pin name	Symbol	Function
1 2	T13/S10 T12/S11	SK SI	Segment output terminals. Active: "H".
3	T11	DISPLAY	Display control output terminal. "H" when display is illuminated.
4	T10	DIRECT	Direct display output terminal. "H" when direct is on.
5	T9	FM	FM control output terminal (receiver only). "H" when set to FM. Controls the automatic reception mode display.
6 7 8 9 10 11 12 13 14	T8 T7 T6 T5 T4 T3 T2 T1 T0	D9 D8 D7 D6 D5 D4 D3 D2 D1	Digit output terminals. Active: "H". Key scan output terminals.
15	V_{DD}	V_{DD}	Power supply terminal (+5V)
16 17	OSC1 OSC2	OSC1 OSC2	Main system clock terminals. Connected to 4 MHz ceramic oscillator. The system clock mode is equivalent to the main clock 1/2 mode (cycle time: 2ls).
18	V_{SS}	V_{SS}	Ground terminal.
19	TEST	TEST	LSI test terminal. Connected to V_{SS}.
20	$\overline{RES}$	$\overline{RES}$	Reset input terminal. Active: "L".
21 22	X1 X2	X1 X2	Sub-clock terminals. Not used. X1 terminal is connectted V_{DD}.
23 24 25 26	PC0 PC1 PC2 PC3	$\overline{LOCAL}$ $\overline{DX}$ $\overline{AUTO}$ $\overline{MONO}$	Automatic reception mode display output terminals. Active: "L". "L" when in automatic reception mode (receiver only). (The settings for DX and LOCAL as well as AUTO and MONO are always the reverse of one another.) All are always "L" for amplifier.
27	PD0	POWER	POWER signal output terminal. "H" when ON.
28	PD1	RELAY	Speaker relay control output terminal. Active "H".
29 30	PD2 PD3	VDP VDP	Video signal control output terminals. Active: "H".
31 32 33 34	PA0 PA1 PA2 PA3	K0 K1 K2 K3	Key input terminals. Active: "H".
35	PB0	$\overline{SD}$	Station detect input terminal (receiver only). Active: "L". Turns off auto tuning.
36	PB1	$\overline{STEREO}$	Stereo broadcast detect terminal. Active: "L". Controls "STEREO" indication (receiver only).
37	PB2	RF IN	RF input terminal (receiver only). DX when "H".
38 39	PB3 PE0/VREF0	$\overline{REC}$/AMP BACK	Initial setting input terminals.
40	PE1/VREF1	$\overline{PHONO}$	PHONO control output terminal. "L" when selector is set to PHONO.
41	PE2/START	$\overline{AUTO}$/MONO/ $\overline{TAPE-2}$	(1) Receiver: AUTO/MONO switching output terminal. "L" when AUTO (receiver only). (2) Amplifier: TAPE-2 control output terminal. "L" when TAPE-2 is on.
42	PF0/SI0	SEL	Output terminal connected to analog switch LC7821 CE terminal.
43	PF1/SO0	DATA	Output terminal connected to DATA terminal of PLL LM7001 and DI terminal of switch LC7821.
44	PF2/$\overline{SCKO}$	CL	Output terminal connected to CL terminals of PLL LM7001 and switch LC7821.
45	PF3/INT0	PLL	Receiver: output terminal connected to CE terminal of PLL LM7001.
46	PG0/SI1	$\overline{DIRECT}$	DIRECT control output terminal. Active: "L".
47	PG1/SO1	INP MUT	INPUT selector muting output terminal. Active: "H".
48	PG2/$\overline{SCK1}$	REC MUT	Record output muting output terminal. Acitve: "H".
49	PG3/INT1	$\overline{POFF}$	Power off sensor input terminal. Active: "L". "L" shorter than 100μs is ignored.
50	PH0/DAC0	TU MUT	Tuner muting output terminal (receiver only). Active: "H".
51	PH1/DAC1	PROTECT	Protect operation sensor input terminal. "H" during protect operation. "H" shorter than 100μs is ignored. Controls RELAY output.
52	PH2/SQR	$\overline{SYS\ IN}$	System code input terminal. Active: "H".
53	PH3/HCNT	$\overline{SYS\ OUT}$/ SYS EN	System code output terminal. Active: "L". Becomes initial setting input terminal SYS EN when power is turned on.
54 55 56 57 58 59 60 61	S0 S1 S2 S3 S4 S5 S6 S7	Sa Sb Sc Sd Se Sf Sg Sh	Segment output terminals. Active: "H".
62	VP	VP	Power supply terminal for pull down resistance.
63 64	T15/S8 T14/S9	Si Sj	Segment output terminals. Active: "H".

CPF3027GR (Fluorescent indicator tube)





Pin No.	1	2	3	4	5	6	7	8	9	10	11
Connection	F	F	NP	G6	NC	f	G5	a	b	G4	ℓ

Pin No.	12	13	14	15	16	17	18	19	20	21	22
Connection	G3	d	n	G2	m	c	G1	e	h	k	g

Pin No	23	24	25	26	27	28	29	30	31
Connection	G1	j	i	NC	NC	G1	NP	F	F

F : Filament G : Gride P : Anode

NP : No pin NC : Non connection

PRINTED CIRCUIT BOARD PARTS LIST

MAIN CIRCUIT PC BOARD (NAAF-3547-2, NAAF-3547-2A) PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q501, Q502	2212285 or	2SC2878-A or
	2212286	2SC2878-B
Q503~Q506	2211455 or	2SA1015-GR or
	2210803	2SA733-P
Q507, Q508	2211371 or	2SC2259-O-001 or
	2211372	2SC2259-O-002
Q509, Q510	2211732 or	2SC1845-F or
	2211733	2SC1845-E
Q511, Q512	2211255 or	2SC1815-GR or
	2210746	2SC945A-P
Q513, Q514	2211353 or	2SA949-O or
	2211354	2SA949-Y
Q515, Q516	2211633 or	2SC2229-O or
	2211634	2SC2229-Y
Q517, Q518	2211255 or	2SC1815-GR or
	2210746	2SC945A-P
Q519, Q520	2211633 or	2SC2229-O or
	2211634	2SC2229-Y
Q521, Q522	2211353 or	2SA949-O or
	2211354	2SA949-Y
Q523, Q524	2201643 or	2SC3298-O or
	2201644	2SC3298-Y
Q525, Q526	2201633 or	2SA1306-O or
	2201634	2SA1306-Y
Q531, Q532	2211633 or	2SC2229-O or
	2211634	2SC2229-Y
Q651	2211455 or	2SA1015-GR or
	2212495	JA101-Q
Q652	2211792 or	2SA992-F or
	2211793	2SA992-E
Q653, Q654	2211732 or	2SC1845-F or
	2211733	2SC1845-E
Q655	2211255 or	2SC1815-GR or
	2212485	JC501-Q
Q911, Q913	2201754 or	2SD1913-R or
	2201755	2SD1913-S
Q912	2201764 or	2SB1274-R or
	2201765	2SB1274-S
	Diodes	
D501, D502	4000120	KB265, Varistor
D503, D504, D652	223163	1SS133
D911~D914	223897 or	P300DL or
	22380003	1N5402F
D915	~~2~~24151602 or	05AZ16Y or
	224651602 or	HZ16EB2 or
	224451603	MTZ16B, Zener
D916	224152003 or	05AZ20Z or
	224652003 or	HZ20ZB3 or
	224452003	MTZ20C, Zener
D918	224151601 or	05AZ16X or
	224651601 or	HZ16EB1 or
	224451601	MTZ16A, Zener
D919	~~22~~4150623 or	05AZ6.2Z or
	224650623 or	HZ6.2EB3 or
	224450623	MTZ6.2C, Zener
D931, D932	223880 or	GP101N4003 or
	223896	1N4003F
D933	224150512 or	05AZ5.1Y or
	224650512 or	HZ5.1EB2 or
	224450512	MTZ5.1B, Zener

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C501, C502	354741009	10 μF, 16V, Elect.
C505, C506, C653	354722219	220 μF, 6.3V, Elect.
C511, C512	354780229	2.2 μF, 50V, Elect.
C529, C530	371124734	0.047 μF, 50V, Mylar
C533, C534		
C535, C536	354790479	4.7 μF, 100V, Elect. [D]
C535, C536	354771019	100 μF, 63V, Elect. [G][W][A][B]
C652	354790479	4.7 μF, 100V, Elect.
C654	354780109	1 μF, 50V, Elect.
C911, C912	3504191	10000 μF, 71V, Elect.
C913	354772219	220 μF, 63V, Elect. [D]
C913	354782219	220 μF, 50V, Elect. [G][W][A][B]
C914	354782219	220 μF, 50V, Elect.
C915, C916	354761019	100 μF, 100V, Elect.
C919, C921	354742219	220 μF, 16V, Elect.
C920	354754719	470 μF, 25V, Elect.
C922	354772219	220 μF, 63V, Elect.
C923	354741019	100 μF, 16V, Elect.
C925	354722219	220 μF, 6.3V, Elect.
C931	354742209	22 μF, 16V, Elect.
	Resistors	
R527, R528	442522704	27 Ω, 1/2W, Metal oxide film
R529, R530	5210062	N06HR4.7KBD, Semi-fixed
R535, R536	442529104	91 Ω, 1/2W, Metal oxide film
R537, R538	442521024	1 Ω, 1/2W, Metal oxide film
R539, R540	442521014	100 Ω, 1/2W, Metal oxide film
R541~R544	442520224	2.2 Ω, 1/2W, Metal oxide film
R545, R546	441720104	1 Ω, 2W, Metal oxide film
R547~R550	4000080 or	0.47 Ω, 5W or
	4500022	0.47 Ω, 5W, Metal plate
R559, R560	442520824	8.2 Ω, 1/2W, Metal oxide film
R564, R565	442522204	22 Ω, 1/2W, Metal oxide film
R658	441721224	1.2KΩ, 2W, Metal oxide film [D]
R658	441729114	910 Ω, 2W, Metal oxide film [G][W][A][B]
R911, R912	441722414	240 Ω, 2W, Metal oxide film
R913	442525624	5.6KΩ, 1/2W, Metal oxide film [D]
R913	442524324	4.3KΩ, 1/2W, Metal oxide film [G][W][A][B]
R914	442525124	5.1KΩ, 1/2W, Metal oxide film [D]
R914	442523624	3.6KΩ, 1/2W, Metal oxide film [G][W][A][B]
R915	441723914	390 Ω, 2W, Metal oxide film
R917	441621114	110 Ω, 1W, Metal oxide film
R918, R919	441721214	120 Ω, 2W, Metal oxide film
R920	442527524	7.5KΩ, 1/2W, Metal oxide film [D]
R920	442525624	5.6KΩ, 1/2W, Metal oxide film [G][W][A][B]
R931	441621824	1.8KΩ, 1W, Metal oxide film [D]
R931	441621524	1.5KΩ, 1W, Metal oxide film [G][W][A][B]
R932	442523914	390 Ω, 1/2W, Metal oxide film
R941	442522294	0.22Ω, 1/2W, Metal oxide film
	Relay	
RL501	25065134	NRL-2P5A-DC24V-07

CIRCUIT NO.	PART NO.	DESCRIPTION
	Jumper sockets	
JL302a, JL901a	25050267	NSCT-3P95
JL903a		
JL902a	25050272	NSCT-8P100
	Radiator	
	27160209	RAD-67
	Bracket	
	27141059	Ground

SPEAKER SWITCH PC BOARD (NASW-3548-2) PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Coils	
L571, L572	231134	S-0.8E
	Resistors	
R571, R572	442520564	5.6 Ω, 1/2W, Metal oxide film
R573, R574	441623914	390 Ω, 1W, Metal oxide film
	Switch	
S571	25030290	NRSF-144-25SS
	Stereo jack	
	25045183	HLJ-4318-01-3020

SPEAKER TERMINAL PC BOARD (NAETC-3549-2, NAETC-3549-2A) PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Terminal	
P571	25060134	NTM-8PDMN-063

SYSTEM CONTROL CIRCUIT PC BOARD (NADG-3564-1, NADG-3564-1A, NADG-3564-1B) PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Photo receiving unit	
U701	24130001	GP1U501S
	ICs	
Q301	22240014	μPC4570HA
Q305, Q307	22240050	μPC4570C
Q701	22240244	LC6538D-3984
Q706	22240243	LC6527C-3987
	Transistors	
Q702, Q704, Q705	2211255 or	2SC1815-GR or
	2212485	JC501-Q
Q703	2211455 or	2SA1015-GR or
	2212495	JA101-Q
Q707	2211504	2SA950-Y
	FL tube	
Q708	212074	CPF3027GR
	Diodes	
D701~D703, D706	223163	1SS133
D721, D722, D724		
D704	224150563 or	05AZ5.6Z or
	224650563 or	HZ5.6EB3 or
	224450563	MTZ5.6C, Zener
D705, D707	223145	1S2076
D723	224150562 or	05AZ5.6Y or
	224650562 or	HZ5.6EB2 or
	224450562	MTZ5.6B, Zener
D725	225141	SEL2213C, LED
	Osc. element	

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C301	354780229	2.2 μF, 50V, Elect.
C303	371121124	1100 pF, 50V, Mylar
C305	371121234	0.012 μF, 50V, Mylar
C307, C309, C310	354780229	2.2 μF, 50V, Elect.
C313, C314, C317		
C318		
C315, C316	371128224	8200 pF, 50V, Mylar
C319, C320, C703	354780109	1 μF, 50V, Elect.
C721		
C321, C322	371123934	0.039 μF, 50V, Mylar
C325, C326	371122234	0.022 μF, 50V, Mylar
C701	3000051	0.047 F, 5.5V, Super
C705	354780339	3.3 μF, 50V, Elect.
C706, C707	354761009	10 μF, 35V, Elect.
C709	354781009	10 μF, 50V, Elect.
C723	354741009	10 μF, 16V, Elect.
	Resistors	
R325	5104228	N11RHC250KWT22Z, Variable
R333, (R334)	5104229	N14RHC100KWT22Z, Variable
R347, (R348)		
R791	442525104	51 Ω, 1/2W, Metal oxide film [D][G][W]
	Switches	
S301, S302	25035588	NPS-142-L550
S701	25035548	NPS-111-S510
	Holder	
	27190659A	(FL)
	27190697	(LED-ST)

KEY SWITCH PC BOARD (NASW-3565-1) PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diodes	
D731, D732	223163	1SS133
	Switches	
S702~S709	25035548	NPS-111-S510

EQUALIZER CIRCUIT PC BOARD (NAETC-3566-1, NAETC-3566-1A) PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q101, Q102	22240191	NJM4565DD
Q401	222840661	4066B
	Transistors	
Q402, Q404~Q406	2211255	2SC1815-GR
Q403	2211455	2SA1015-GR
	Capacitors	
C103, C104	372121014	100 pF, 50V, Styrene [G][W][A][B]
C105, C106, C401	354741009	10 μF, 16V, Elect.
C403		
C109, C110, C117	354721019	100 μF, 6.3V, Elect.
C118		
C111, C112	372121814	180 pF, 50V, Styrene
C113, C114	371126224	6200 pF, 50V, Mylar
C115, C116	371121824	1800 pF, 50V, Mylar
C119, C120	354742219	220 μF, 16V, Elect.
C402, C404	354724719	470 μF, 6.3V, Elect.
C406	354741029	1000μF, 16V, Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistor	
R421	442526204	62 Ω, 1/2W, Metal oxide film
	Terminal	
P203	25045252	NPJ-6PDBL124
P401	25045205	NPJ-3PDYE085
	Socket ass'y	
P402	2000971	NSAS-4P923
	Jumper socket	
JL401a	25050270	NSCT-6P98

SELECTOR SWITCH CIRCUIT PC BOARD (NAAF-3567-1, NAAF-3567-1A) PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q201	22240079	LC7821
Q207, Q209	22240025	LC4966
Q251	22240050	μPC4570C
	Transistors	
Q801, Q804, Q805	2211455 or	2SA1015-GR or
	2212495	JA101-Q
Q802, Q803, Q806	2211255 or	2SC1815-GR or
	2212485	JC501-Q
	Diodes	
D801, D802	224150562 or	05AZ5.6Y or
	224650562 or	HZ5.6EB2 or
	224450562	MTZ5.6B, Zener
	Capacitors	
C211~C214, C811	354780229	2.2 μF, 50V, Elect.
C251~C254		
C813, C816	354744709	47 μF, 16V, Elect.
C814	354780109	1 μF, 50V, Elect.
	Terminals	
P201, P202	25045213	NPJ-6PDBL-92
	Jumper sockets	
JL204a, JL301a	25050267	NSCT-3P95
JL701a	25050270	NSCT-6P98
	Switch	
S201	25065286	NSS-22112

POWER SWITCH CIRCUIT PC BOARD (NAPS-3568-1, NAPS-3568-1A, NAPS-3568-1B, NAPS-3568-1C) PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diode	
D905	223163	1SS133 [D][G][W]
	Capacitors	
C901, C902	3500065A	0.01 μF, AC400V/125V, IS
	Switch	
S901	25035550	NPS-111-L512P [D][G][W]
	Terminal	
	25060092	NTM-1S33
	Relay	
RL901	25065269	NRL-1P5A-DC12-36ZA [D]
RL901	25065248	NRL-1P15A-DC12-29ZA [G][W]
	Fuse holder	
F901a	250113	SN5051 [D][W]
F902a	25050065	YSH4037 [G][W][A][B]
F903a	25050065	YSH4037 [G]

VOLUME CONTROL CIRCUIT PC BOARD (NAETC-3569-1, NAETC-3569-1A) PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q751	222963	LB1630
	Diodes	
D752, D753	223163	1SS133
	Capacitors	
C751	354741009	10 μF, 16V, Elect.
C752	354780339	3.3 μF, 50V, Elect.
	Resistors	
R361, (R362)	5104234	N16RGM50KA30F, Variable
	Socket ass'y	
P351	2000635A	NSAS-4P591
	Plate	
	27141059	

BUS TERMINAL PC BOARD (NAETC-3570-1, NAETC-3570-1A) PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Mini jack	
P701	25045172	HSJ-1003-01-020

VIDEO TERMINAL PC BOARD (NAETC-3571-1, NAETC-3571-1A) PARTS LIST

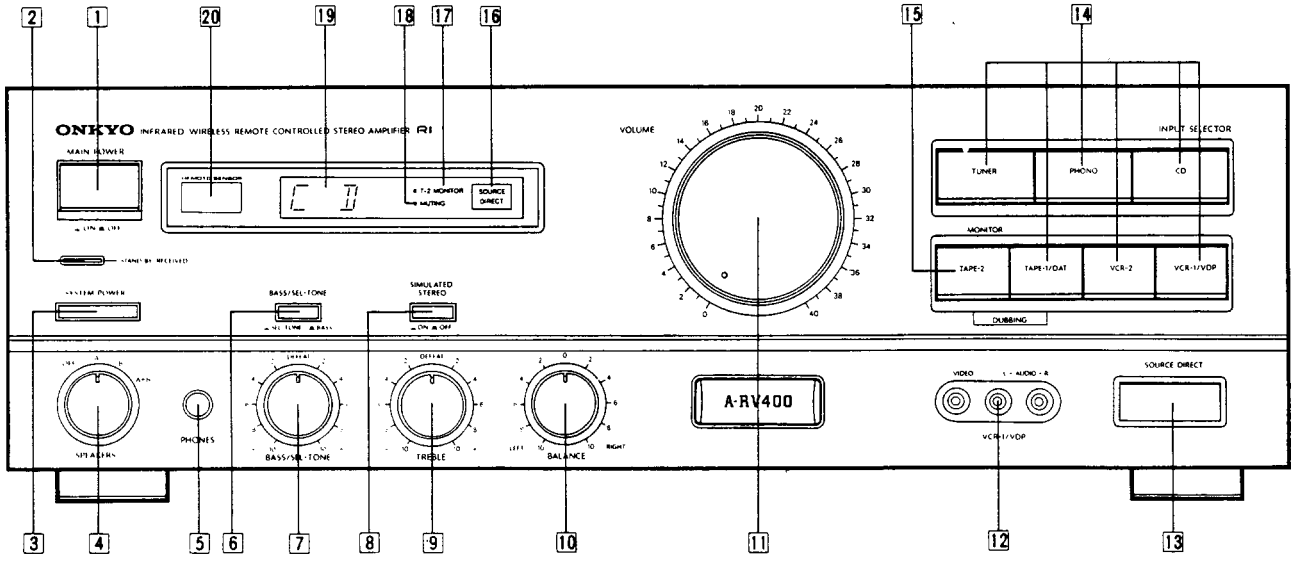
CIRCUIT NO.	PART NO.	DESCRIPTION
	Terminal	
P204	25045206	NPJ-3PDYE086

VOLUME INDICATOR PC BOARD (NADIS-3572-1) PARTS LIST

CIRCUIT NO.	PART NO.	DESCRIPTION
	Diode	
D751	225141	SEL2213C, LED
	Holder	
	27190545	(LED)

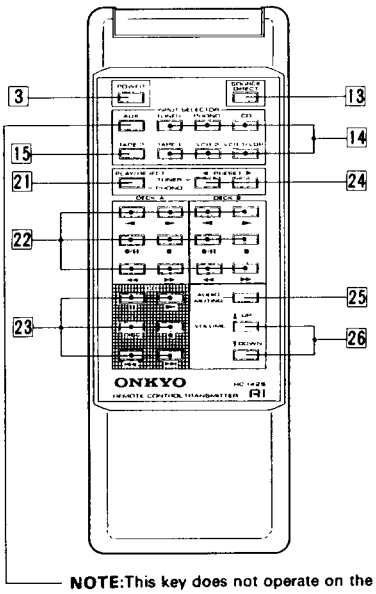
NOTE [D]: Only 120V model
[G]: Only 220V model
[W]: Only 120V/220V model
[A]: Only Australian model
[B]: Only British model

FRONT PANEL FACILITIES



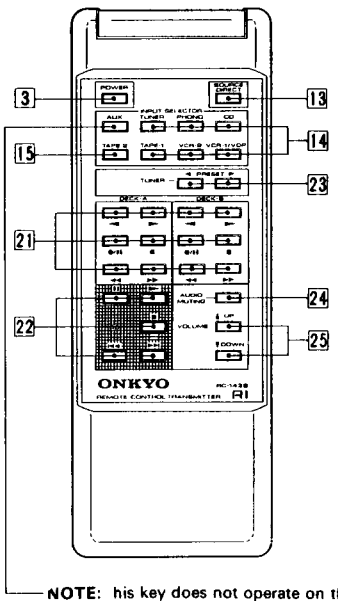
1. Main power switch (MAIN POWER)
2. Stand-by/Received indicator
3. System power button (SYSTEM POWER)
4. Speaker selector (SPEAKERS)
   OFF, A, B, A+B
5. Headphone jack (PHONES)
6. Bass/Selective tone switch (BASS/SEL-TONE)
   BASS, SEL-TONE
7. Bass control/Selective tone control knob (BASS/SEL-TONE)
8. Simulated stereo switch (SIMULATED STEREO)
9. Treble control knob (TREBLE)
10. Balance control knob (BALANCE)
11. Volume control knob (VOLUME)
12. Video cassette recorder or Video disk player input jack (VCR-1/VDP)
13. Source direct button (SOURCE DIRECT)
14. Input selector buttons (INPUT SELECTOR)
    Audio selectors ------- TUNER, PHONO, CD, TAPE-1/DAT
    Video selectors ------- VCR-1/VDP, VCR-2
15. Tape monitor button (TAPE-2/MONITOR)
16. Source direct indicator
17. T-2 Monitor indicator
18. Muting indicator
19. Input selector display
20. Remote control sensor

Remote control transmitter controls (RC-142S)



21. Phono operation key (PLAY/REJECT)
22. Tape operation keys (DECK-A, DECK-B)
    REVERSE PLAY, FORWARD PLAY, REC PAUSE, STOP, FAST REWIND, FAST FORWARD
23. CD operation key (CD)
    PAUSE, PLAY, STOP, DISC, UP, DOWN
24. Tuner operation keys (PRESET)
25. Audio muting keys (AUDIO MUTING)
26. Volume keys (UP, DOWN)

Remote control transmitter controls (RC143S)



21. Tape operation keys (DECK-A, DECK-B)
    REVERSE PLAY, FORWARD PLAY, REC PAUSE, STOP, FAST REWIND, FAST FORWARD
22. CD Operation keys (CD)
    PAUSE, PLAY, STOP, DOWN, UP
23. Tuner operation keys (PRESET)
24. Audio muting key (AUDIO MUTING)
25. Volume keys (UP, DOWN)

PARTS LIST OF PACKING

A-RV400

REF. NO.	PART NO.	DESCRIPTION
A851	29051884	MASTER CARTON BOX
A852	29091322B	PAD, LEFT
A853	29091323B	PAD, RIGHT
A854	261504	W = 30 mm, PAPER TAPE
A865	29100063	580 × 750, POLY-VINYL BAG
A866	282301	SEALING HOOK
A867	260012	W = 50 mm, DAMPLON TAPE
A868	29360778	LABEL (FLASH) [N]
A869	29380054	BS-2, AC COARD TAG [B]
A900	ACCESSARY BAG ASS'Y	
	29341391A	INSTRUCTION MANUAL [D][N]
	29341392A	INSTRUCTION MANUAL [G][W][A][B]
	29365019	WARRANTY CARD [N]
	29365022	WARRANTY CARD [B]
	29358002G	SERVICE STATION LIST [N]
	291000097	350 × 250, POLY-VINYL BAG
	24140142A	RC-142S, REMOTE CONTROL UNIT [D][N]
	24140143	RC-143S, REMOTE CONTROL UNIT [G][W][A][B]
	3010054	UM-3, TOW BATTERIES
	2010169	3.5 MINI PLUG
	25055018	CV-K-1, CONVERSION PLUG [W]
	29360863	LABEL (CAUTION) [B]

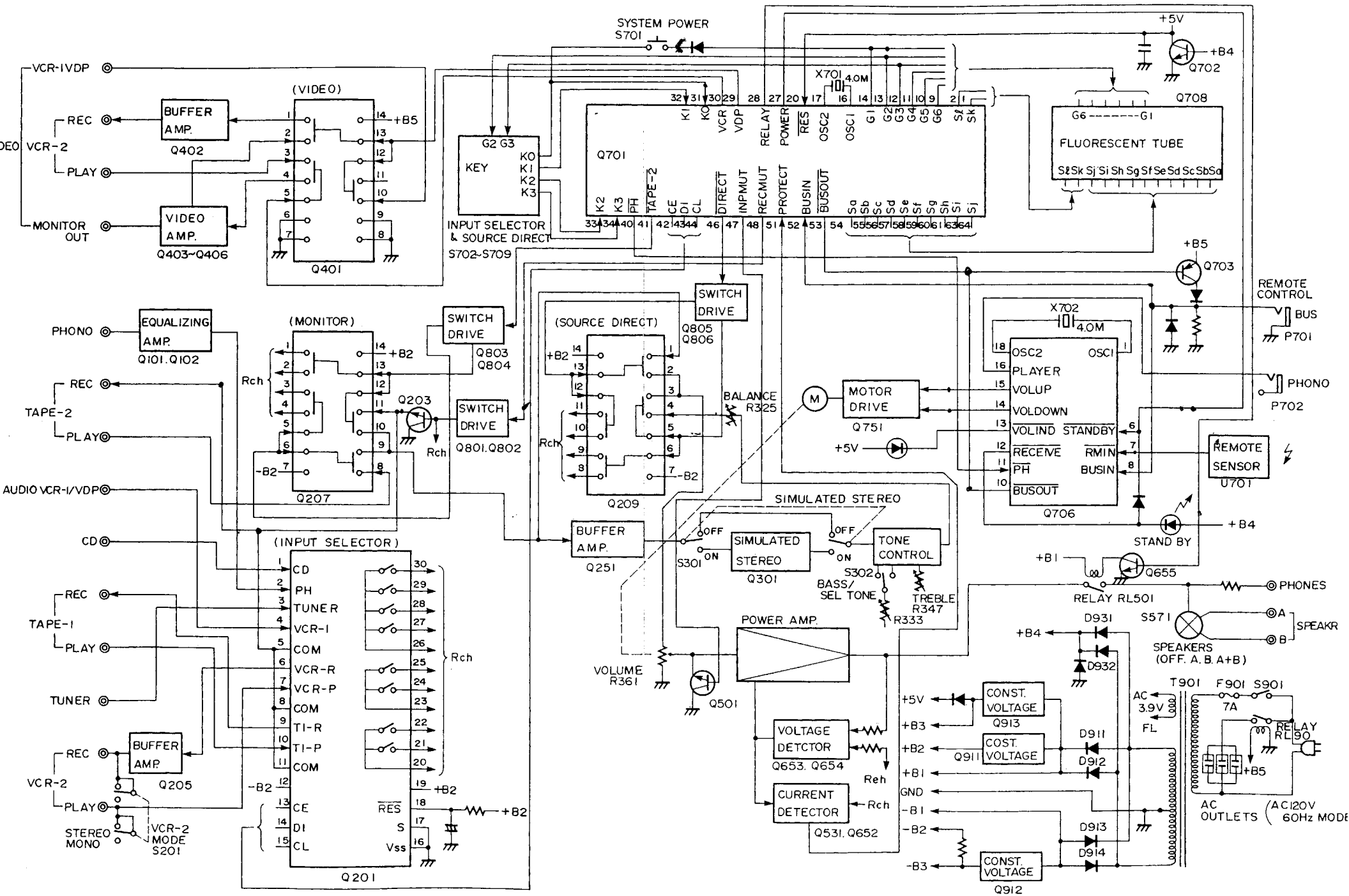
NOTE
[D]: ONLY 120V MODEL
[G]: ONLY 220V MODEL
[W]: ONLY 120V/220V MODEL
[N]: ONLY U.S.A. MODEL
[A]: ONLY AUSTRALIAN MODEL
[B]: ONLY BRITISH MODEL

A-RV400M

REF. NO.	PART NO.	DESCRIPTION
A851	29051952	MASTER CARTON BOX
A852	29091322B	PAD, LEFT
A853	29091323B	PAD, RIGHT
A854	261504	W = 30 mm, PAPER TAPE
A865	29100063	580 × 750, POLY-VINYL BAG
A866	282301	SEALING HOOK
A867	260012	W = 50 mm, DAMPLON TAPE
A868	29360778	LABEL (FLASH) [N]
A900	ACCESSARY BAG ASS'Y	
	29341391A	INSTRUCTION MANUAL
	29365019	WARRANTY CARD [N]
	29358002G	SERVICE STATION LIST [N]
	291000097	350 × 250, POLY-VINYL BAG
	24140035	RC-AV20M, REMOTE CONTROL UNIT
	29341378	INSTRUCTION MANUAL FOR REMOTE CONTROL
	29355154	CAUTION FOR REMOTE CONTROL
	3010109	AM-4, FOUR BATTERIES
	2010169	3.5 MINI PLUG

NOTE
[N]: ONLY U.S.A. MODEL

OCK DIAGRAM


SYSTEM POWER
S701
+5V
+B4
Q702
X701 4.0M
Q708
FLUORESCENT TUBE
G6 ------- G1
Sl Sk Sj Si Sh Sg Sf Se Sd Sc Sb Sa
Q701
K1 K0 VCR VDP RELAY POWER RES OSC2 OSC1 G1 G2 G3 G4 G5 G6 Sl Sk
K2 K3 PH TAPE-2 CE DI CL DIRECT INPMUT RECMUT PROTECT BUSIN BUSOUT Sa Sb Sc Sd Se Sf Sg Sh Si Sj
VCR-1/VDP
REC
PLAY
VCR-2
MONITOR OUT
BUFFER AMP.
Q402
VIDEO AMP.
Q403~Q406
(VIDEO)
Q401
+B5
G2 G3
KEY
K0
K1
K2
K3
INPUT SELECTOR & SOURCE DIRECT
S702~S709
SWITCH DRIVE
Q805 Q806
(SOURCE DIRECT)
Q209
BALANCE R325
SWITCH DRIVE
Q803 Q804
SWITCH DRIVE
Q801.Q802
(MONITOR)
Q207
Q203
Rch
+B2
-B2
PHONO
EQUALIZING AMP.
Q101.Q102
TAPE-2
AUDIO VCR-1/VDP
CD
(INPUT SELECTOR)
CD
PH
TUNER
VCR-1
COM
VCR-R
VCR-P
COM
TI-R
TI-P
COM
CE
DI
CL
RES
S
Vss
Q201
TAPE-1
TUNER
BUFFER AMP.
Q205
STEREO MONO
VCR-2 MODE S201
BUFFER AMP.
Q251
SIMULATED STEREO
OFF
ON
S301
SIMULATED STEREO
Q301
TONE CONTROL
S302
BASS/ SEL TONE
TREBLE R347
R333
VOLUME R361
Q501
POWER AMP.
MOTOR DRIVE
Q751
M
+5V
X702 4.0M
Q706
OSC2
OSC1
PLAYER
VOLUP
VOLDOWN
VOLIND
STANDBY
RECEIVE
RMIN
PH
BUSIN
BUSOUT
REMOTE SENSOR
U701
STAND BY
+B4
+B1
Q655
RELAY RL501
REMOTE CONTROL
BUS
P701
PHONO
P702
PHONES
SPEAKR
A
B
S571
SPEAKERS (OFF. A. B. A+B)
D931
D932
D911
D912
D913
D914
T901
F901 7A
S901
AC 3.9V
FL.
RELAY RL90
+B5
AC OUTLETS (AC120V 60Hz MODE
CONST. VOLTAGE
Q913
CONST. VOLTAGE
Q911
CONST. VOLTAGE
Q912
VOLTAGE DETCTOR
Q653. Q654
CURRENT DETECTOR
Q531. Q652
+B3
+B2
+B1
GND
-B1
-B2
-B3
Reh
Rch

SCHEMATIC DIAGRAM

(120V Model)